I CLAIM AS MY INVENTION:

1. A heat transfer medium with high heat transfer rate formed by dissolving the following compounds in water to produce a mixture, and drying the resulting mixture to produce said heat transfer medium product with said compounds in the following weight percentages:

1. Cobaltic Oxide (Co_2O_3), 0.5%-1.0%,
2. Boron Oxide (B_2O_3), 1.0%-2.0%,
3. Calcium Dichromate ($CaCr_2O_7$), 1.0%-2.0%,
4. Magnesium Dichromate ($MgCr_2O_7.6\ H_2O$), 10.0%-20.0%,
5. Potassium Dichromate ($K_2Cr_2O_7$), 40.0%-80.0%,
6. Sodium Dichromate ($Na_2Cr_2O_7$),10.0%-20.0%,
7. Beryllium Oxide (BeO), 0.05%-0.10%,
8. Titanium Diboride (TiB_2), 0.5%-1.0%,
9. Potassium Peroxide (K_2O_2), 0.05%-0.10%,
10. A metal or ammonium Dichromate (MCr_2O_7), 5.0%-10.0%,

where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium,

11. Strontium Chromate ($SrCrO_4$), 0.5%-1.0%, and,
12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.5%-1.0%.

2. The heat transfer medium of claim 1 where the weight percentages in the said heat transfer medium product are:

1. Cobaltic Oxide (Co_2O_3), 0.7-0.8%,
2. Boron Oxide (B_2O_3), 1.4-1.6%,
3. Calcium Dichromate ($CaCr_2O_7$), 1.4-1.6%,
4. Magnesium Dichromate ($MgCr_2O_7.6\ H_2O$), 14.0-16.0%,

5. Potassium Dichromate ($K_2Cr_2O_7$), 56.0-64.0%,

6. Sodium Dichromate ($Na_2Cr_2O_7$), 14.0-16.0%,

7. Beryllium Oxide (BeO), 0.07-0.08%,

8. Titanium Diboride (TiB_2), 0.7-0.8%,

9. Potassium Peroxide (K_2O_2), 0.07-0.08%,

10. A metal or ammonium Dichromate (MCr_2O_7), 7.0-8.0%, where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium,

11. Strontium Chromate ($SrCrO_4$), 0.7-0.8%, and,

12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.7-0.8%.

3. The heat transfer medium of claim 1 where the weight percentages in the said heat transfer medium product are:

1. Cobaltic Oxide (Co_2O_3), 0.723%;

2. Boron Oxide (B_2O_3), 1.4472%;

3. Calcium Dichromate ($CaCr_2O_7$), 1.4472%;

4. Magnesium Dichromate ($MgCr_2O_7 .6 H_2O$), 14.472%;

5. Potassium Dichromate ($K_2Cr_2O_7$), 57.888%;

6. Sodium Dichromate ($Na_2Cr_2O_7$), 14.472%;

7. Beryllium Oxide (BeO), 0.0723%;

8. Titanium Diboride (TiB_2), 0.723%;

9. Potassium Peroxide (K_2O_2), 0.0723%;

10. A metal or ammonium Dichromate (MCr_2O_7), 7.23%, where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium;

11. Strontium Chromate ($SrCrO_4$), 0.723%; and;

12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.723%.

4. The heat transfer medium of claim 1 where the thermal conductivity of the heat transfer medium product is greater than 32,000 times that of metallic silver.

5. The heat transfer medium of claim 2 where the thermal conductivity of the heat transfer medium product is greater than 32,000 times that of metallic silver.

6. The transfer medium of claim 3 where the thermal conductivity of the heat transfer medium product is greater than 32,000 times that of metallic silver.

7. A heat transfer medium formed by dissolving the following compounds in water in the listed amounts (+/- 0.10% per compound) to produce a mixture, and drying the resulting mixture to produce said heat transfer medium product:

1. Cobaltic Oxide (Co_2O_3), 0.01g;
2. Boron Oxide (B_2O_3), 0.02g;
3. Calcium Dichromate ($CaCr_2O_7$), 0.02g;
4. Magnesium Dichromate ($MgCr_2$ .6 H_2O), 0.2g;
5. Potassium Dichromate ($K_2Cr_2O_7$), 0.8g;
6. Sodium Dichromate ($Na_2Cr_2O_7$), 0.2g;
7. Beryllium Oxide (BeO), 0.001g;
8. Titanium Diboride (TiB_2), 0.01g;
9. Potassium Peroxide (K_2O_2), 0.001g;
10. "M" Dichromate (MCr_2O_7), 0.1g; where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium,
11. Strontium Chromate ($SrCrO_4$), 0.01g; and
12. Silver Dichromate ($Ag_2Cr_2O_7$),0.01g.

8. The high thermal conductivity heat transfer medium of claim 7 where the thermal conductivity of the heat transfer medium product is greater than 32,000 times that of metallic silver.

9. A heat transfer surface comprising a surface substrate covered at least in part by a heat transfer medium with high heat transfer rate formed by dissolving the following compounds in water to produce a mixture, and drying the resulting mixture to produce said heat transfer medium product with said compounds in the following weight percentages:

1. Cobaltic Oxide (Co_2O_3), 0.5%-1.0%,
2. Boron Oxide (B_2O_3), 1.0%-2.0%,
3. Calcium Dichromate ($CaCr_2O_7$), 1.0%-2.0%,
4. Magnesium Dichromate ($MgCr_2O_7.6\ H_2O$), 10.0%-20.0%,
5. Potassium Dichromate ($K_2Cr_2O_7$), 40.0%-80.0%,
6. Sodium Dichromate ($Na_2Cr_2O_7$),10.0%-20.0%,
7. Beryllium Oxide (BeO), 0.05%-0.10%,
8. Titanium Diboride (TiB_2), 0.5%-1.0%,
9. Potassium Peroxide (K_2O_2), 0.05%-0.10%,
10. A metal or ammonium Dichromate (MCr_2O_7), 5.0%-10.0%,

where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium

11. Strontium Chromate ($SrCrO_4$), 0.5%-1.0%, and,
12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.5%-1.0%.

10. The heat transfer surface of claim 9 wherein the heat transfer medium with high heat transfer rate is comprised of weight percentages in the said heat transfer medium product of:

1. Cobaltic Oxide (Co_2O_3), 0.7-0.8%,
2. Boron Oxide (B_2O_3), 1.4-1.6%,
3. Calcium Dichromate ($CaCr_2O_7$), 1.4-1.6%,
4. Magnesium Dichromate ($MgCr_2O_7.6\ H_2O$), 14.0-16.0%,
5. Potassium Dichromate ($K_2Cr_2O_7$), 56.0-64.0%,

6. Sodium Dichromate ($Na_2Cr_2O_7$), 14.0-16.0%,

7. Beryllium Oxide (BeO), 0.07-0.08%,

8. Titanium Diboride (TiB_2), 0.7-0.8%,

9. Potassium Peroxide (K_2O_2), 0.07-0.08%,

10. A metal or ammonium Dichromate (MCr_2O_7), 7.0-8.0%, where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium,

11. Strontium Chromate ($SrCrO_4$), 0.7-0.8%, and,

12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.7-0.8%.

11. The heat transfer surface of claim 9 wherein the heat transfer medium with high heat transfer rate is comprised of weight percentages in the said heat transfer medium product are:

1. Cobaltic Oxide (Co_2O_3), 0.723%;

2. Boron Oxide (B_2O_3), 1.4472%;

3. Calcium Dichromate ($CaCr_2O_7$), 1.4472%;

4. Magnesium Dichromate ($MgCr_2O_7 .6 H_2O$), 14.472%;

5. Potassium Dichromate ($K_2Cr_2O_7$), 57.888%;

6. Sodium Dichromate ($Na_2Cr_2O_7$), 14.472%;

7. Beryllium Oxide (BeO), 0.0723%;

8. Titanium Diboride (TiB_2), 0.723%;

9. Potassium Peroxide (K_2O_2), 0.0723%;

10. A metal or ammonium Dichromate (MCr_2O_7), 7.23%, where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium;

11. Strontium Chromate ($SrCrO_4$), 0.723%; and,

12. Silver Dichromate ($Ag_2Cr_2O_7$), 0.723%.

12. The heat transfer surface of claim 9 wherein the heat transfer medium with high heat transfer rate has a thermal conductivity greater than 32,000 times that of metallic silver.

13. The heat transfer surface of claim 10 wherein the heat transfer medium with high heat transfer rate has a thermal conductivity greater than 32,000 times that of metallic silver.

14. The heat transfer surface of claim 11 wherein the heat transfer medium with high heat transfer rate has a thermal conductivity greater than 4,000 times that of metallic silver.

15. A heat transfer surface comprising a surface substrate covered at least in part by a heat transfer medium with high heat transfer rate formed by dissolving the following compounds in water in the listed amounts (+/- 0.10% per compound) to produce a mixture, and drying the resulting mixture to produce said heat transfer medium product:

1. Cobaltic Oxide (Co_2O_3), 0.01g;
2. Boron Oxide (B_2O_3), 0.02g;
3. Calcium Dichromate ($CaCr_2O_7$), 0.02g;
4. Magnesium Dichromate ($MgCr_2 \cdot 6 H_2O$), 0.2g;
5. Potassium Dichromate ($K_2Cr_2O_7$), 0.8g;
6. Sodium Dichromate ($Na_2Cr_2O_7$), 0.2g;
7. Beryllium Oxide (BeO), 0.001g;
8. Titanium Diboride (TiB_2), 0.01g;
9. Potassium Peroxide (K_2O_2), 0.001g;
10. "M" Dichromate (MCr_2O_7), 0.1g; where "M" is selected from the group consisting of potassium, sodium, silver, and ammonium,
11. Strontium Chromate ($SrCrO_4$), 0.01g; and
12. Silver Dichromate ($Ag_2Cr_2O_7$),0.01g.

16. The heat transfer surface of claim 15 wherein the heat transfer medium with high heat transfer rate product has a thermal conductivity greater than 32,000 times that of metallic silver.